

The Afghanistan Agrometeorological Monthly Bulletin



Issue No:47

January 2009



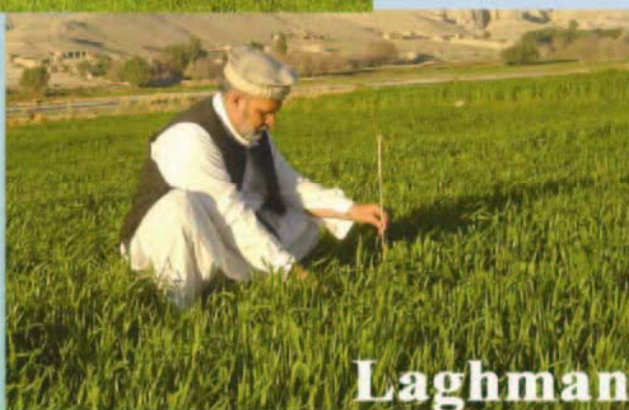
Kabul

Snow recorded :

100-150 cm for the Northeastern region
30-60 cm for the Northwestern region
10-30 cm for the Central higlands



Jalalabad



Laghman



Sarobi

Agromet Network

USGS



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Summary

Agriculture output depends mainly on Three things: a) agricultural inputs and seasonal performance (rain and snow fall), and farmers' practices. Generally, snow starts in Afghanistan in early November and continues through March in Higher elevations such as northeast and central highlands. Rain and snow during winter and early spring is vital for agriculture and livestock (pastures). Until January 30, 2009, the country experienced above normal rainfall in comparison to the same period of last year and long term average.

The above normal rainfall in January 2009 resulted in sufficient water supply which will contribute to high yield of winter wheat and other crops. The rain fed agriculture outcomes depend on March, April and May's rainfall for which we need to wait for the results.

Above normal temperature caused early snow melt all over Afghanistan, Kabul and some other parts

received rain instead of snow which is unusual in this period of time. Also due to above normal temperatures significant decrease of snow extent occurred in comparison to snow extent during January 2008. This adverse factor could impact irrigation water supply in the coming months. Snow depth has recorded 100-150 cm in northeast region and 30-60 cm in central highlands.

Reports from observation sites show that wheat is in dormancy and emergence stage in major parts of the country. However, only in Nangarhar province wheat is in vegetative stage (more than 4 inches). The wheat crop conditions is not visible in areas where wheat is in dormancy and emergence stages while in Nangarhar Province the wheat condition is reported normal.

In comparison to last year January, large decrease of NDVI value experienced in central highlands, west and southwest parts of the country

Zone	Province	District	Station	Wheat Crop Stage	Crop Condition	Adverse Factor
Central	Kabul	Shakardara	Karizmir	Dormancy	Dormancy	Not seen
		Paghman	Paghman	Dormancy	Dormancy	Not seen
		Sarubi	Sarubi	Emergence	Not visible	Not seen
	Panjsher	Dara	Dara	Dormancy	Dormancy	Not seen
		Dashtak	Dashtak	Dormancy	Dormancy	Not seen
	Parwan	Ghorband	Syagerd	Emergence	Not visible	Not seen
		Charikar	Charikar	Emergence	Not visible	Not seen
	Kapisa	Mahmoodraqi	Mahmoodraqi	Emergence	Not visible	Not seen
		Kohistan	Kohistan	Emergence	Not visible	Not seen
	Wardak	Chak	Chak	Dormancy	Dormancy	Not seen
		Jaghato	Jaghato	Dormancy	Dormancy	Not seen
East Central	Bamyan	Central Bamyan	Bamyan	Dormancy	Dormancy	Not seen
		Yakawlang	Yakawlang	Dormancy	Dormancy	Not seen
		Panjab	Panjab	Dormancy	Dormancy	Not seen
Eastern	Nangarhar	Agam	Agam	Vegetative	Normal	Not exist
		Batikot	Ghaziabad	Vegetative	Normal	Not existed
		Jalalabad	Sheshembagh	Vegetative	Normal	Not exist
		Jalalabad	Farm Jadeed	Vegetative	Normal	Not exist
	Konar	Asmar	Asmar	Emergence	Not visible	Not seen
		Asadabad	Asadabad	Emergence	Not visible	Not seen
	Laghman	Mihtarlam	Mihtarlam	Emergence	Not visible	Not seen

Crop Stage, Crop Condition and Adverse Factor

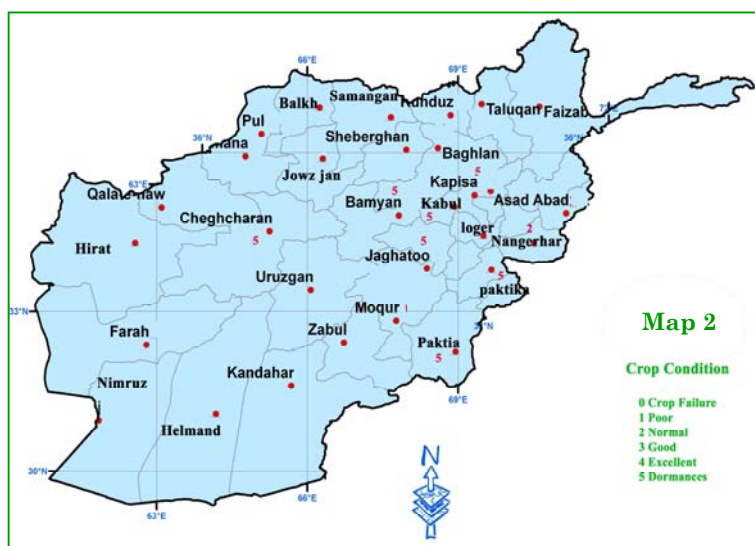
Zone	Province	District	Station	Wheat Crop Stage	Crop Condition	Adverse Factor
Northeastern	Takhar	Bangi	Bangi	Emergence	Not visible	Not seen
		Taluqan	Taluqan	Emergence	Not visible	Not seen
	Kunduz	Imam Sahib	Imam Sahib	Emergence	Not visible	Not seen
		Aqtipa	Aqtipa	Emergence	Not visible	Not seen
		Chardara	Chardara	Emergence	Not visible	Not seen
		Kunduz	Kunduz	Emergence	Not visible	Not seen
	Baghlan	Baghlan Jadid	Pozaishan	Emergence	Not visible	Not seen
	Badakhshan	Faizabad	Faizabad	Dormancy	Dormancy	Not seen
South Eastern	Khost	Khost	Khost	Emergence	Not visible	Not seen
		Shimal	Shimal	Emergence	Not visible	Not seen
		Ali Sher	Ali Sher	Emergence	Not visible	Not seen
	Paktia	Gardiz	Rohani Baba	Dormancy	Dormancy	Not seen
		Gardiz	Tera	Dormancy	Dormancy	Not seen
	Paktika	Urgon	Urgon	Emergence	Not visible	Not seen
		Sharana	Sharana	Dormancy	Dormancy	Not seen
		Khairkot	Khairkot	Dormancy	Dormancy	Not seen
	Ghazni	Muqur	Muqur	Dormancy	Dormancy	Not seen
		Bande Sardi	Bande Sardi	Dormancy	Dormancy	Not seen
Southern	Nimroz	Zaranj	Zaranj	Emergence	Not visible	Water deficiency
	Kandahar	Kandahar	Kandahar	Emergence	Not visible	Not seen
	Zabul	Qalat	Qalat	Emergence	Not visible	Not seen
	Urozgan	Tarinkot	Tarinkot	Emergence	Not visible	Not seen
	Hilmand	Nad Ali	Nad Ali	Emergence	Not visible	Not seen
		Greshk	Greshk	Emergence	Not visible	Not seen
		Nawa	Nawa	Emergence	Not visible	Not seen
		Lashkargah	Bolan	Emergence	Not visible	Not seen
Northern	Balkh	Dihdadi	Dihdadi	Emergence	Not visible	Not seen
		Nahrishahi	Nahrishahi	Emergence	Not visible	Not seen
	Jawzjan	Sheberghan	Sheberghan	Emergence	Not visible	Not seen
		Darzab	Darzab	Emergence	Not visible	Not seen
	Saripul	Saripul	Saripul	Emergence	Not visible	Not seen
		Sozmaqala	Sozmaqala	Emergence	Not visible	Not seen
	Faryab	Maimana	Maimana	Emergence	Not visible	Not seen
	Samangan	Aibak	Aibak	Emergence	Not visible	Not seen
		Dara Yosuf	Dara Yosuf	Emergence	Not visible	Not seen
Western	Badghis	Qalainow	Qalainow	Emergence	Not visible	Not seen
		Muqur	Muqur	Emergence	Not visible	Not seen
	Ghor	Chaghcharan	Chaghcharan	Dormancy	Dormancy	Not seen
	Hirat	Shindand	Shindand	Emergence	Not visible	Not seen
		Hirat	Farm Urdokhan	Emergence	Not visible	Not seen
	Farah	Farah	Farah	Emergence	Not visible	Not seen

Crop Stage, Crop Condition and Adverse Factor, Maps

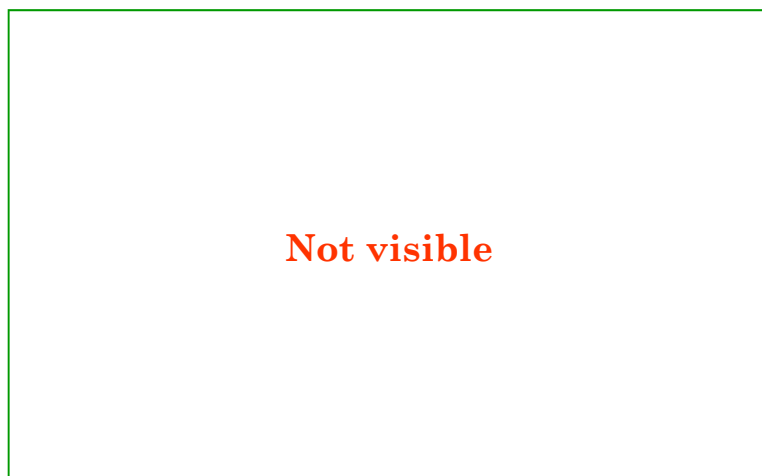
Wheat Crop Stage - January 2009



Wheat Crop Condition - January 2009



Wheat - Adverse Factor January 2009



Rainfall Situation

Rainfall for the month of January 2009 had an increase compared to the same month in 2008 across the country.

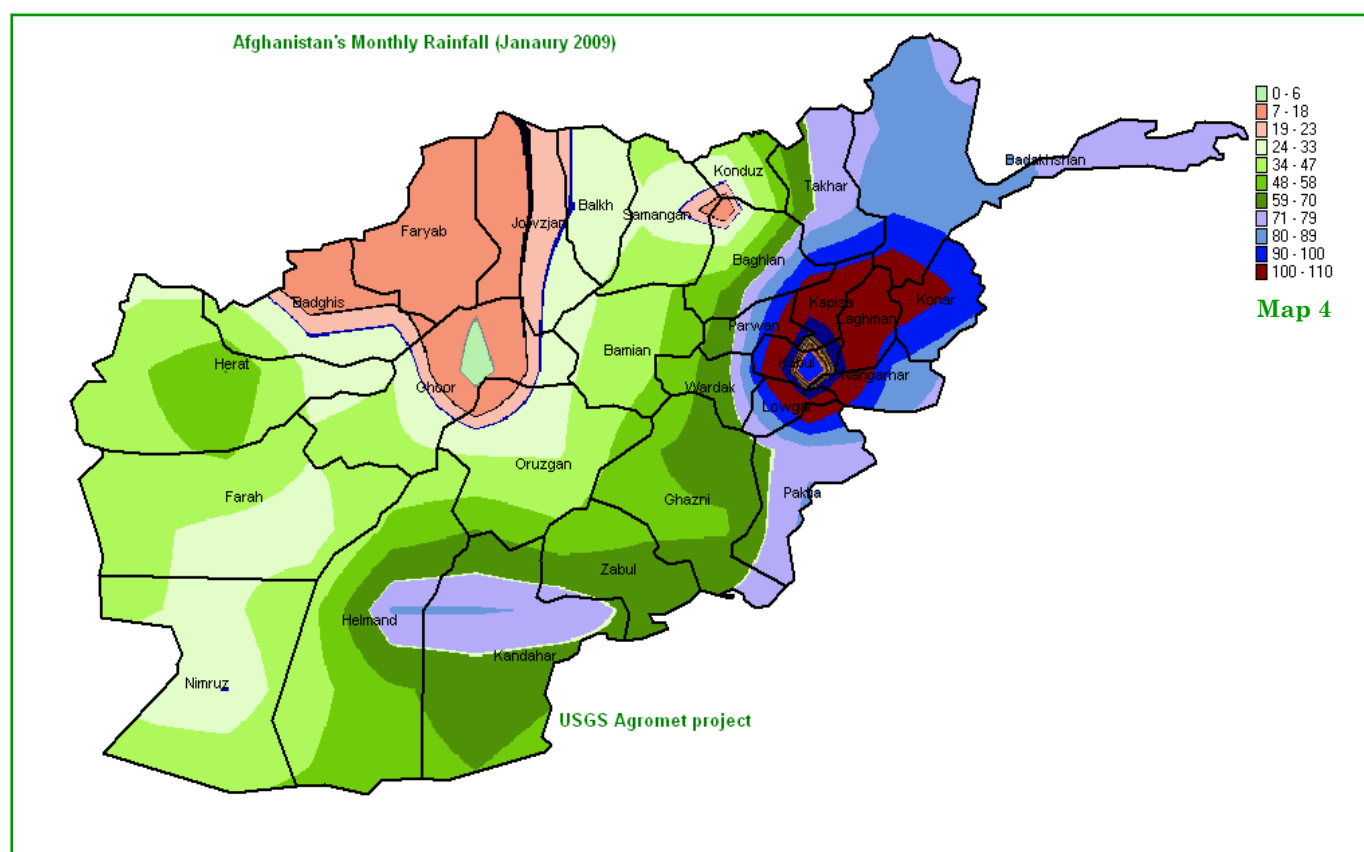
During the month of January 2009 numerous winter storm moved toward the country and brought widespread rain and snow in most parts, and precipitation during the month of January 2009 was higher compared to the same month of last year.

Comparison of rainfall data for the month of January 2009 with the same month in 2008 (chart1) shows an increase of rainfall during the month of January 2009 over the same month of last year.

The rainfall was higher across the majority of the country with only small area which was below the same month of last year.

Over all, the country experienced good rainfall during the month of January 2009 which could reduce long term precipitation deficit. The percentage +/- of rainfall shown in next page (table1).

Comparison of rainfall data for the month of January 2009 with the same month of long term average (chart 2) shows an increase of rainfall in most parts of the country during the month of January 2009 compared to the same month of long term average, except in limited area where rainfall had small decrease over the same month of long term average, but in general rainfall was higher during the month of January 2009 compared to same month of long term average around the country. The percentage +/- of rainfall shown in next page (table 2).



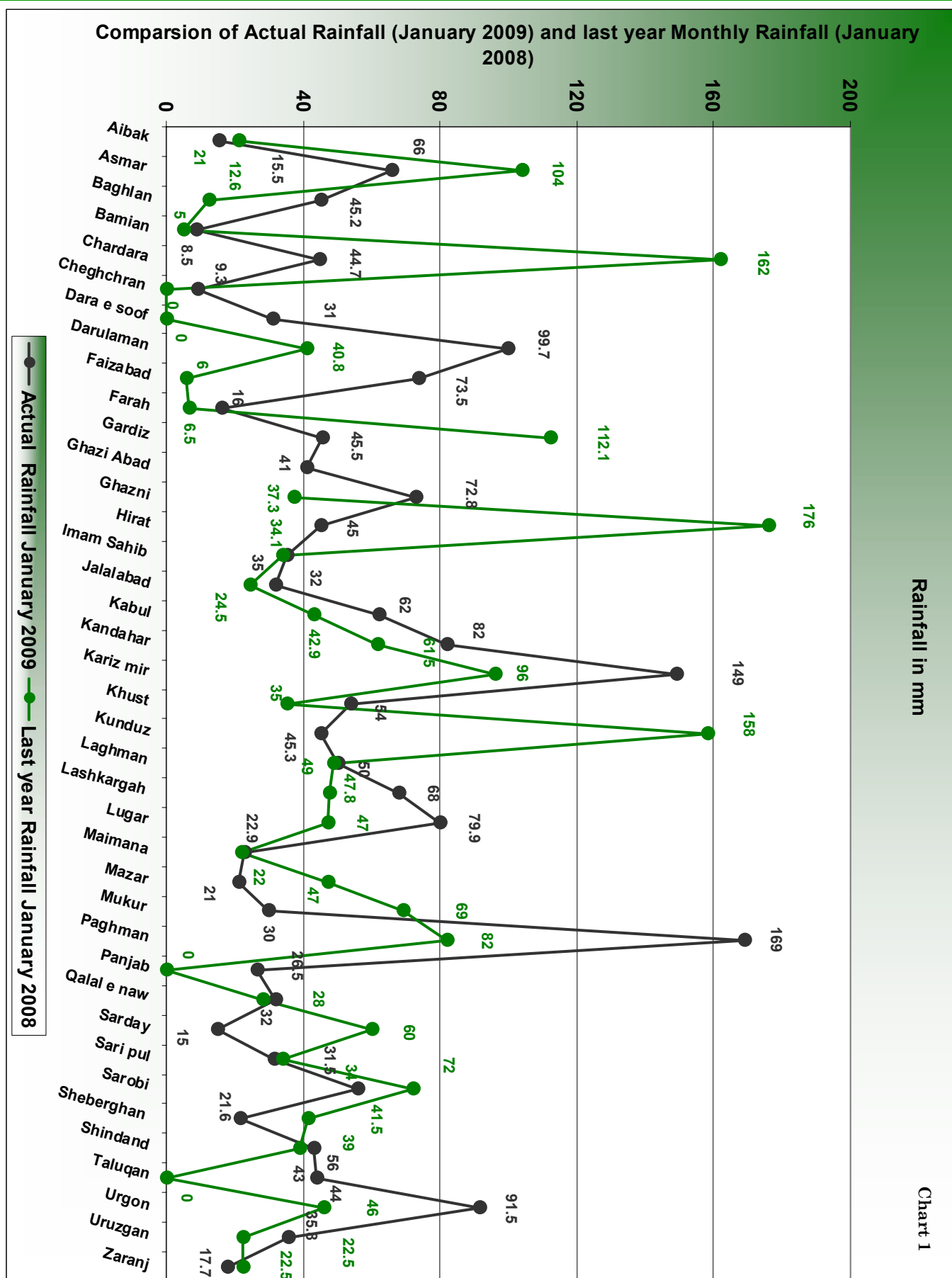
Map (4) shows distribution of rainfall for the month of January 2009 across the country.

However distribution of rainfall was variable in different regions, most amount of rainfall occurred in the capital region and neighboring areas

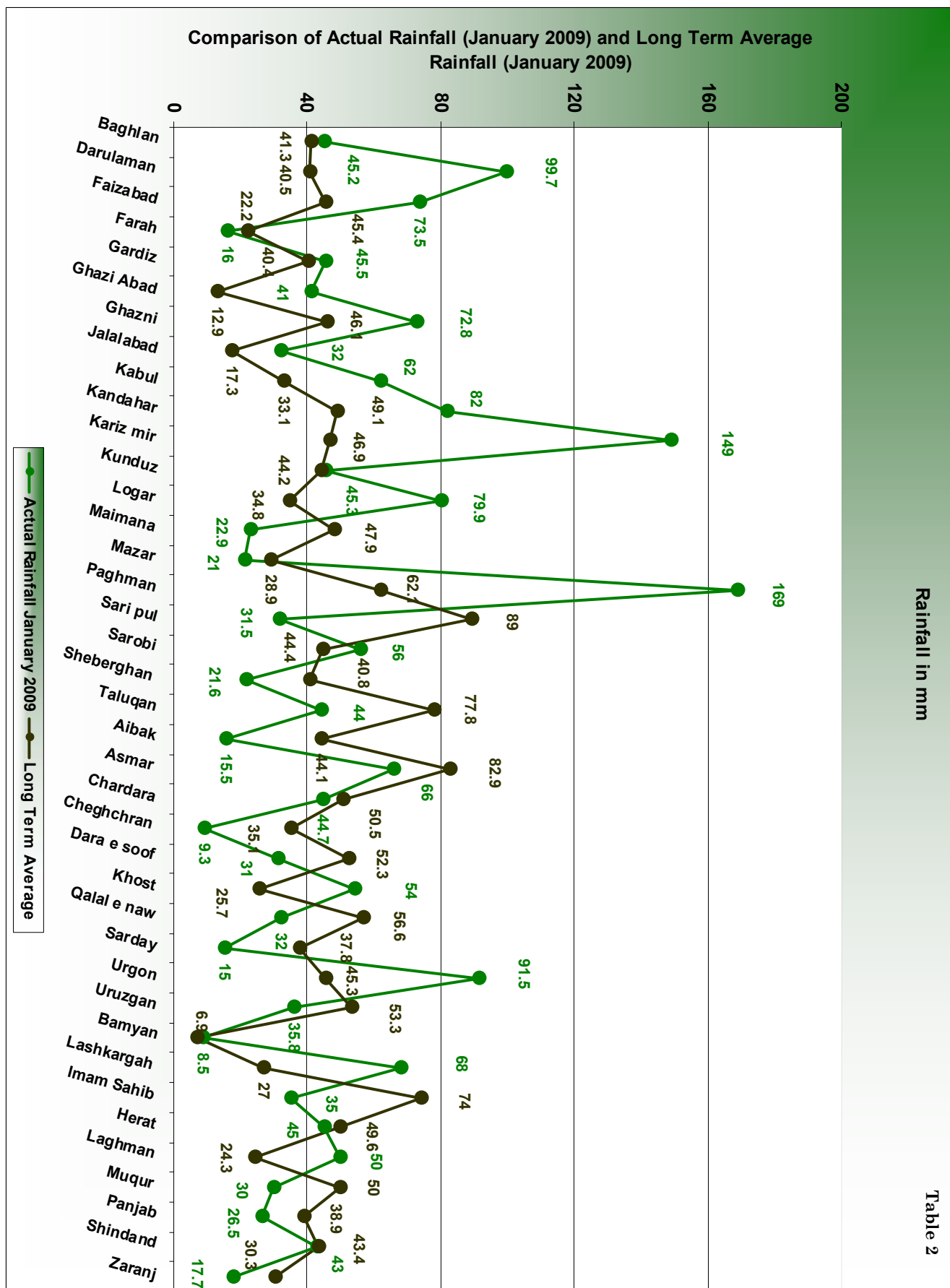
during the month of January 2009 and some parts of the Southern region also received good rainfall.

The Northern region and Western parts of the Central Highlands received less amount of rainfall during the month of January 2009.

Rainfall Graphs for the Month of January 2009



Rainfall Graphs for the Month of January 2009



Rainfall in mm

Table 2

Rainfall for the Month of January 2009

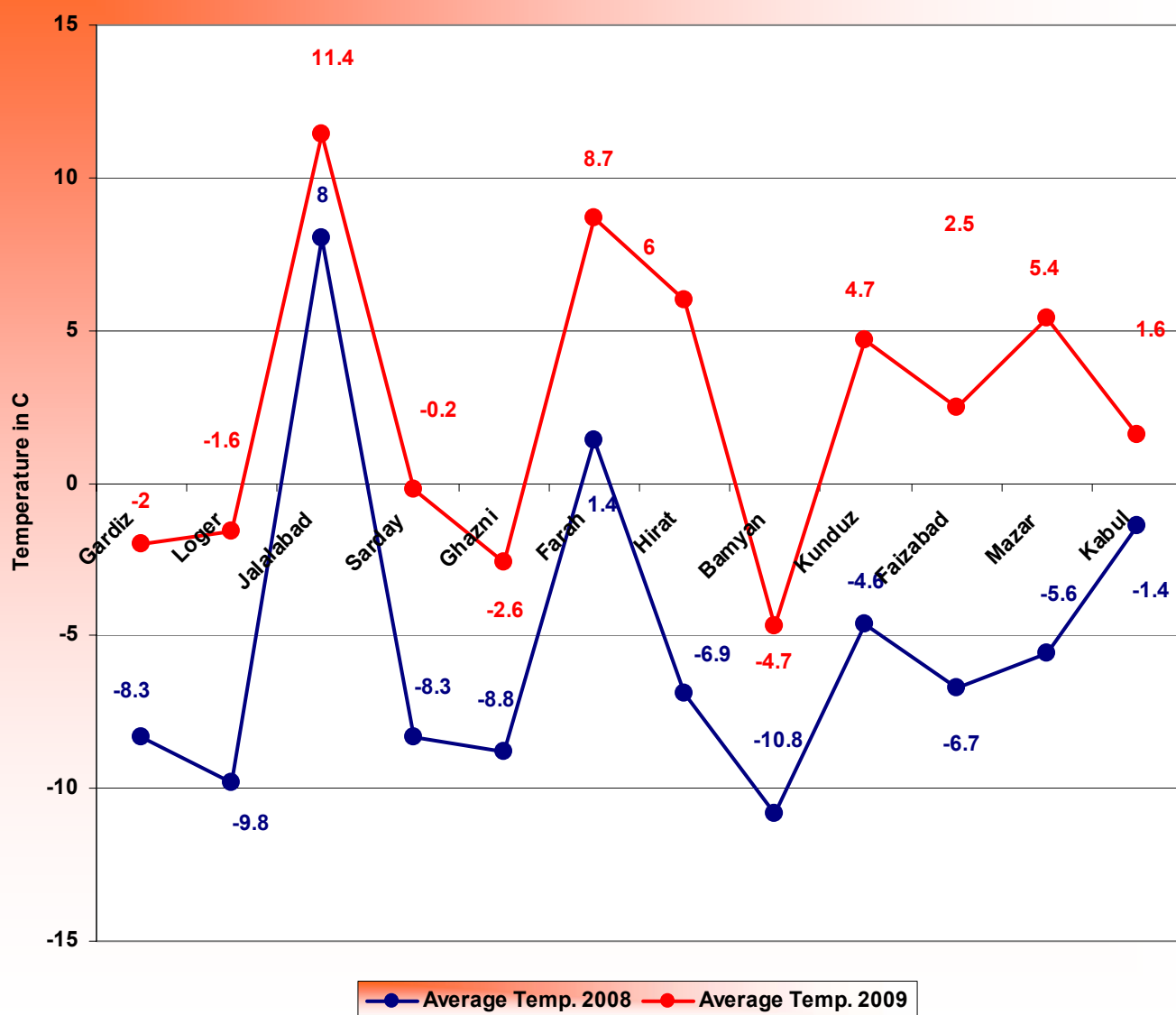
Table 2

Name	Actual Rainfall January 2009	Last year Rainfall January 2008	Long Term Average
Aibak	15.5	21	44.1
Asmar	66	104	82.9
Baghlan	45.2	12.6	41.3
Bamyan	8.5	5	6.9
Chardara	44.7	162	50.5
Cheghchran	9.3	0	35.1
Dara e soof	31	0	52.3
Darulaman	99.7	40.8	40.5
Faizabad	73.5	6	45.4
Farah	16	6.5	22.2
Gardiz	45.5	112.1	40.4
Ghazni	72.8	37.3	46.1
Hirat	45	176	49.6
Imam Sahib	35	34.1	74
Jalalabad	32	24.5	17.3
Kabul	62	42.9	33.1
Kandahar	82	61.5	49.1
Kariz mir	149	96	46.9
Khost	54	35	25.7
Kunduz	45.3	158	44.2
Laghman	50	49	24.3
Lashkargah	68	47.8	27
Logar	79.9	47	34.8
Maimana	22.9	22	47.9
Mazar	21	47	28.9
Muqur	30	69	50
Paghman	169	82	62.1
Panjab	26.5	0	38.9
Qalal e naw	32	28	56.6
Sarday	15	60	37.8
Sari pul	31.5	34	89
Surubi	56	72	44.4
Sheberghan	21.6	41.5	40.8
Shindand	43	39	43.4
Taluqan	44	0	77.8
Urgon	91.5	46	45.3
Uruzgan	35.8	22.5	53.3
Zaranj	17.7	22.5	30.3

Average Temperature for the Month of January 2009

Average Temperature (January 2009) Compared with the Same Month of 2008

Chart 3



Temperature for the month of January 2009 was higher than the same month of last year.

Monthly average temperature during the month of January 2009 was higher significantly compared to the same month in 2008 across the country.

Starting late November 2008 and early January 2009 monthly average temperature was above average. Comparison of monthly average of temperature for month

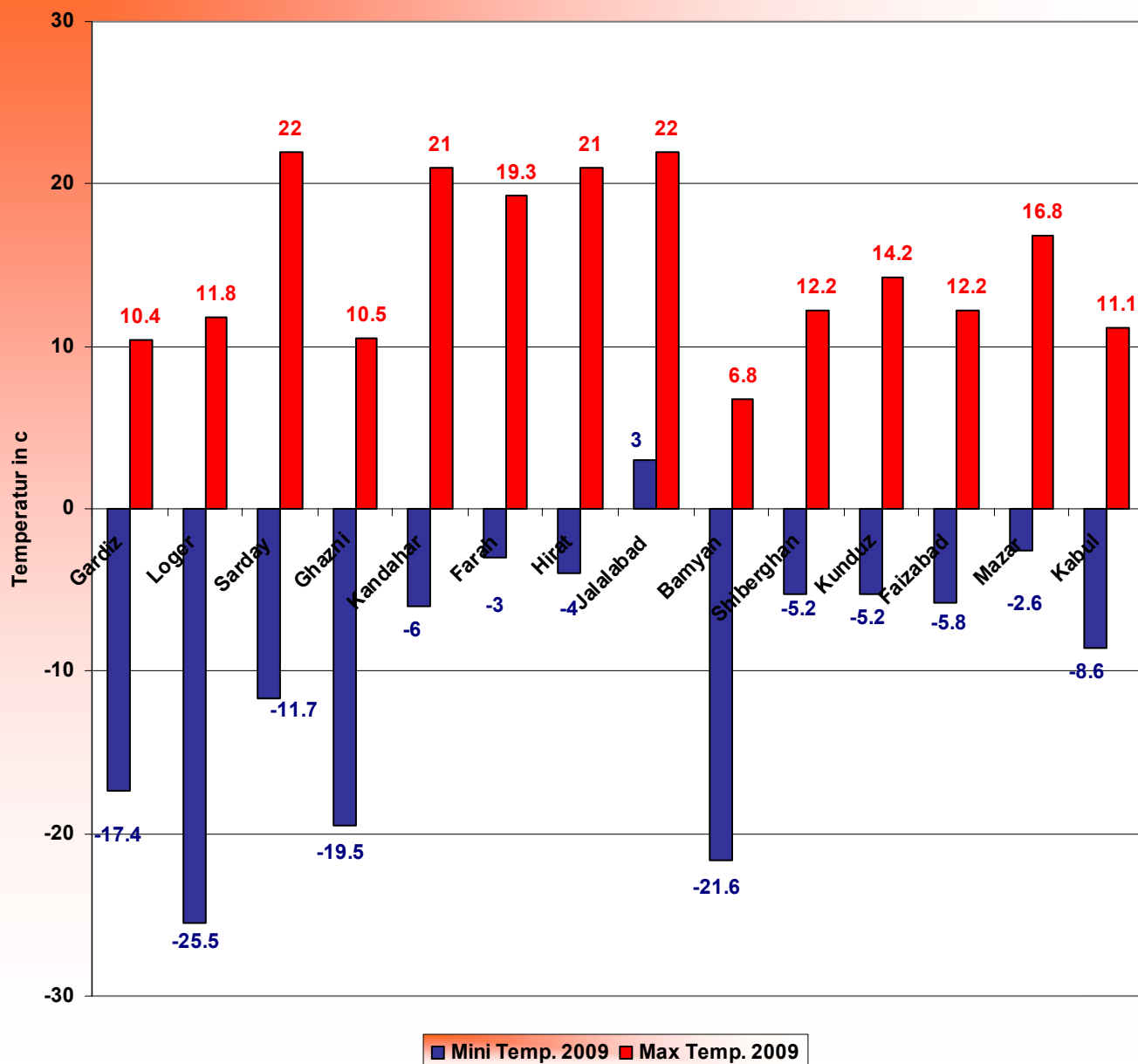
of January 2009 with the same month in 2008, (chart 3) shows significant increase of temperature during the month of January 2009 over the same month of last year across the country.

Temperature for the month of January current year 2 up to 4 °C was higher than the same month of last year.

Temperature for the Month of January 2009

Mininum and Maximum Temperature of January 2009

Chart 4

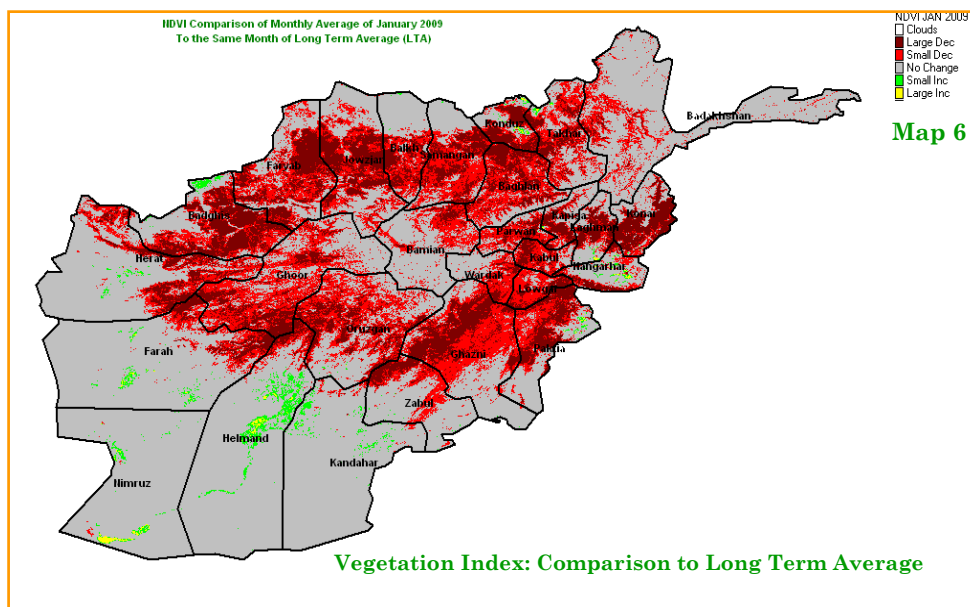
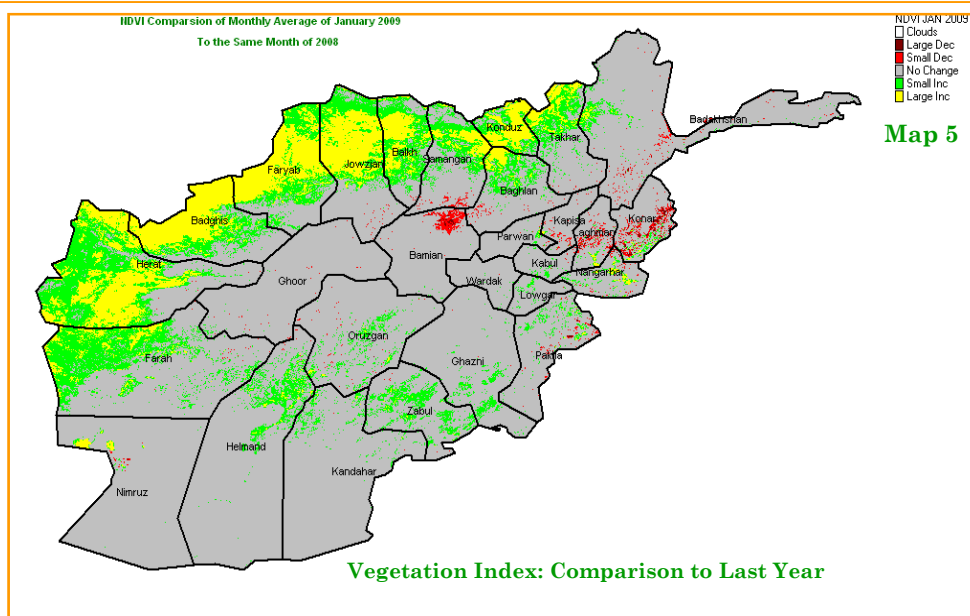


Loger with -25°C experienced extreme cold during the month of January 2009 and Jalalabad with 22°C was the warmest spot of the country .

Chart (4) shows maximum and minimum temperatures for the month of January 2009 around the country, and minimum temperature drop down below -20°C in high elevations.

As chart (4) shows, Loger with -25.5°C experienced extreme cold during the month of January 2009 and Jalalabad with 22°C was the warmest spot of the country.

Comparison of NDVI January 2009

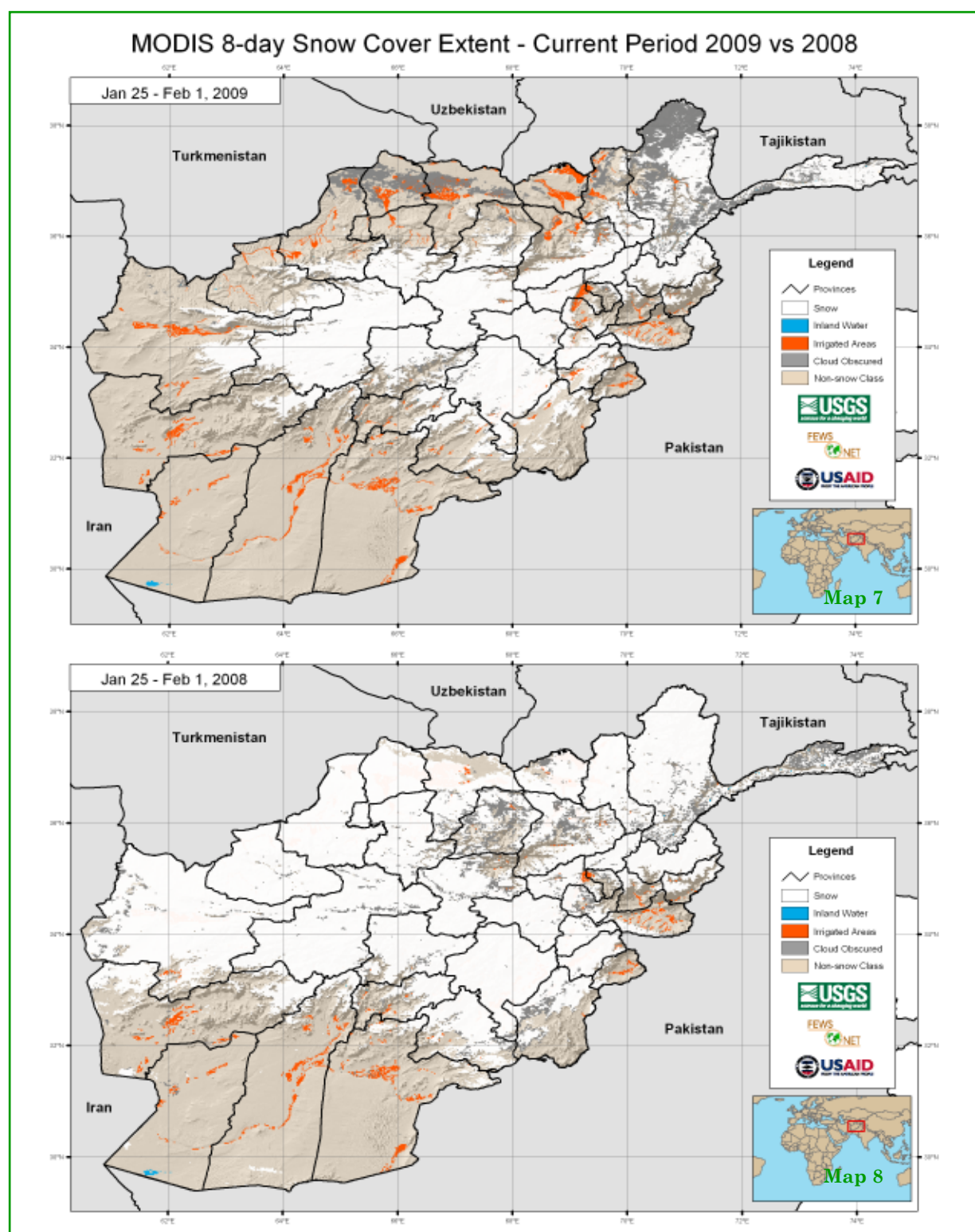


NDVI: January 2009

Comparison NDVI for the month of January 2009 with the same month in 2008 (map 5) shows large increase of NDVI in the Northern flat areas, Northwestern and Western regions during the month of January 2009 compared to the same month of last year, and small increase occurred as separated in limited area in the Southern region. There is no change in NDVI value in remaining regions of the country during the month of January 2009 over the same month in 2008. Comparison of monthly average of NDVI for the month of January 2009 with the same month

of long term average (map 6) shows large decrease of NDVI in the Northern, Northwestern regions, Western parts of the Central Highlands, Southeastern region, Capital region, Eastern region and some parts of the Northeastern region during the month of January 2009 compared to the same month of long term average. There is no change in NDVI value in the remaining in the Southern, Southwestern regions and Western flat areas during the month of January 2009 over the same month of long term average.

Comparison of Snow Extent



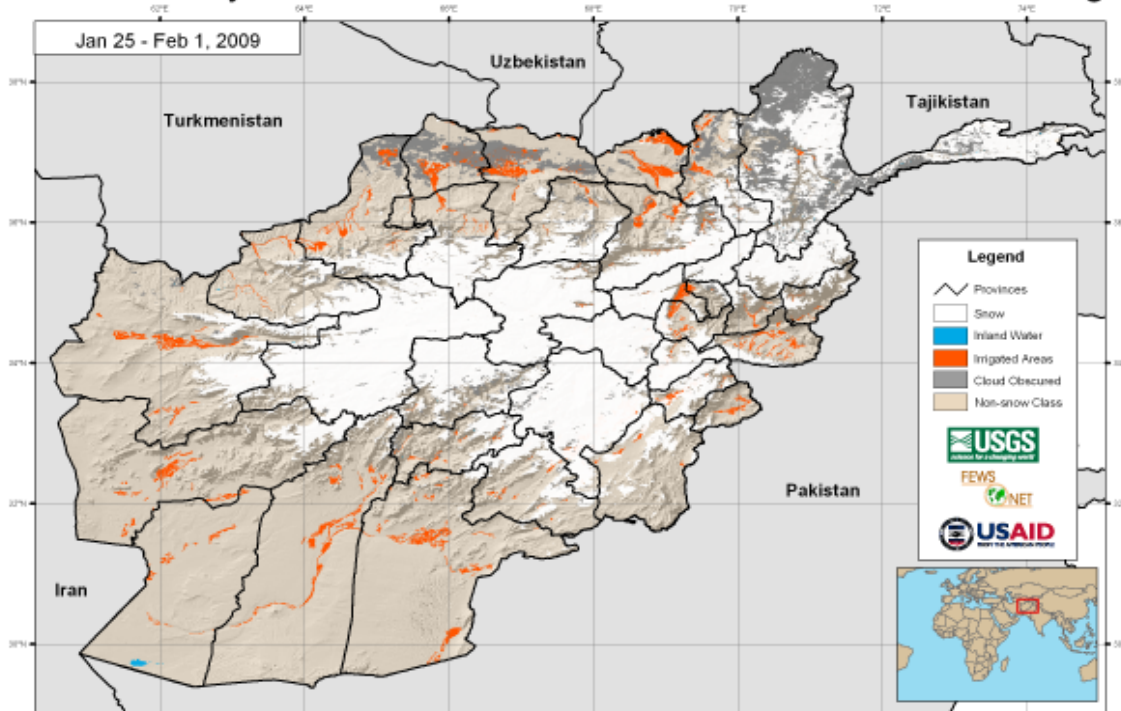
During January low pressure system tracked across the country and brought widespread snow and rain inside the country, and significant snow accumulated in the Northeastern region, Hindokosh Mountains, Central Highlands and neighboring areas. Comparison of snow extent for the period (January 25 – February 1) 2009 with the same period in 2008

(map 8) shows significant decrease in snow extent during the above mentioned period of January compared to the period of last year.

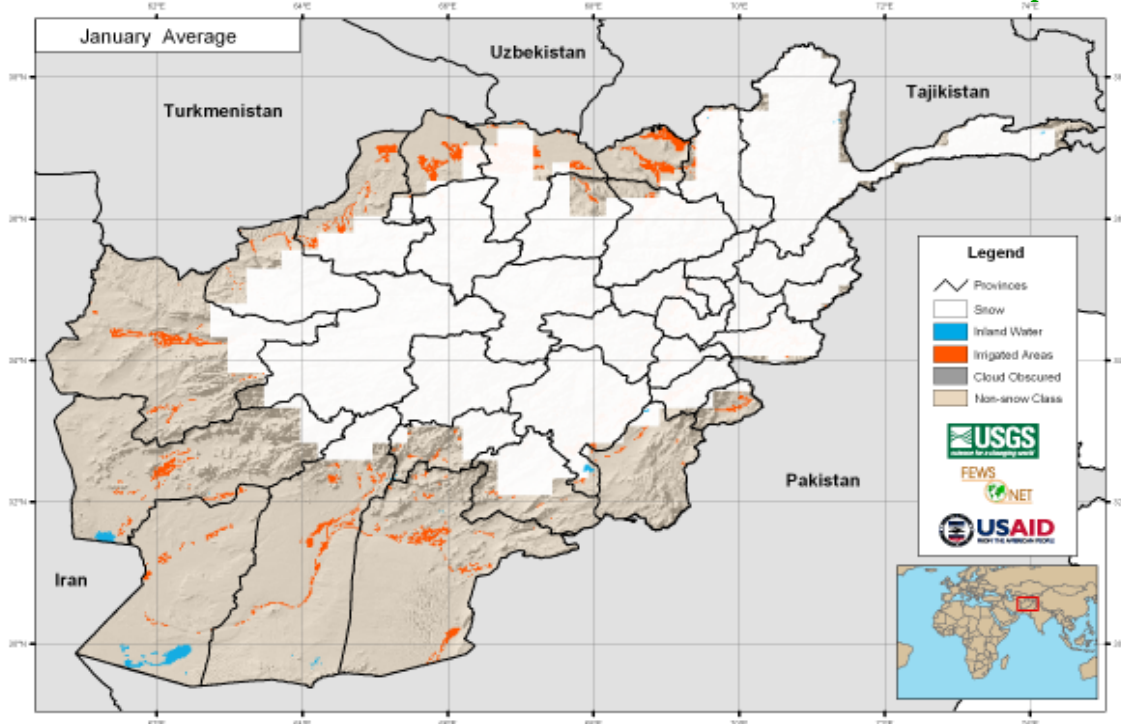
The area covered by snow in January was less than the area covered in the same month in 2008.

Comparison of Snow Extent

MODIS 8-day Snow Cover Extent - Current vs. Historical Average



Map 9

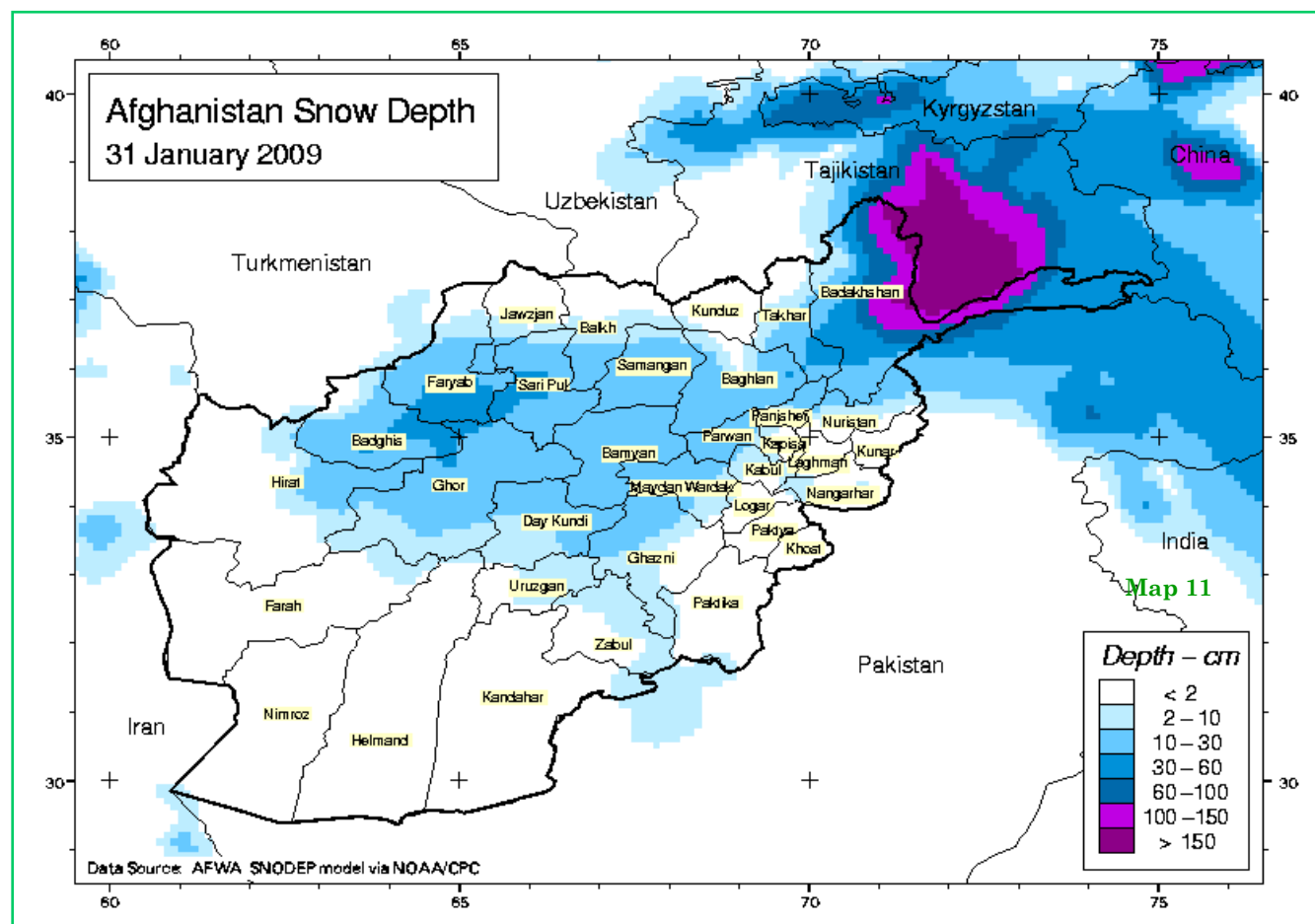


Map 10

Comparison of snow extent for the month of January 2009 with the same month of long term average (map 10) shows significant decrease compared

to the same month of long term average, the area which covered by snow during January was critical less than long term average.

Afghanistan Snow Depth for the month of January 2009



Map (11) shows snow depth in the end of January 2009 across the country. As map (11) shows the snow recorded 100 to 150 cm for the Northeastern neighboring areas. region.

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